

Land Use Dynamics and Agro-Pastoral Conflicts in Menchum Division, Cameroon

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Abstract—This study sets out to investigate land use dynamics and agro-pastoral conflicts in Menchum Division, North West Region of Cameroon. The major land uses are: agriculture, settlements and grazing. The dynamism of these variables over time has led to the prevalence of agro-pastoral conflicts in Menchum Division. These conflicts are the farmer-grazier conflicts, grazier-grazier conflicts and the farmer-farmer conflicts. This paper has examined the different land uses over time in the context of these conflicts, has discussed the causes of the conflicts and the impacts of these conflicts on the people of Menchum. It has also proposed conflict management options in Menchum Division. The study employed the use of primary and secondary data sources to come out with the results. The major primary data sources included field observation, interviews and questionnaires. A total of 178 questionnaires were distributed using the stratified random sampling technique and the data obtained was supplemented by secondary sources from published and unpublished materials. The data were presented in tables, charts and graphs and subjected to interpretation. The findings revealed that the farmer-grazier conflicts have precarious effects on the indigenous population and that many indigenes are not satisfied with the way conflicts are resolved in Menchum. They attribute it to the appointment of Divisional Officers (DOs) and Senior Divisional Officers (SDOs) and the continuous money minded royal lineages. It was also found out that conflict prevention strategies are used but remain inadequate because of animal mobility, population pressure and the deterioration of the environment. The study recommended, among other things, the need for agro-pastoral education in managing the commons, government subsidies to farmers and graziers and the creation of many transhumance zones.

Keywords— Land use dynamics, Agro-pastoralism, farmer-grazier conflicts.

I. INTRODUCTION

Menchum Division has undergone significant land use changes over the past years. Its land had formerly been used extensively for human activities; farming, livestock raising, hunting and to an extent forest exploitation (wood gathering for commercial and domestic purposes). The increasing human population has today led to increase demand for settlements, crop and pasturelands. This has led to the establishment of a man-made dynamic disequilibrium as land becomes limited in supply and they are now facing problems of population pressure continue unabated. There is therefore a relationship between population growth and land cover/land use changes [1]. Land use and environmental modifications often accompany social and economic change [2]. Land use practices will have a significant effect on the management of rangeland and the sustainable use of natural resources [3]. Much of the empirical work elsewhere indicates that the change in land use in pastoral and agro-pastoral areas has a strong link with the nature of land tenure in place and the influence of other policy related factors [4, 5]

Menchum Division has gone through serious changes in the last 30 years. The expansion in farm lands and settlements has led to a contraction in pastureland for the increasing livestock number and this has led to the depletion of the natural resource base. The formerly fertile uplands have been depleted and both livestock and farmers are massively moving towards the valleys for survival. This development has drastically changed the people-land relationship and balance in the lowlands has resulted in severe agro-pastoral conflicts. This have been seen between farmers and grazier over farm and pasture lands, grazier and grazier over limited pastureland and farmer and farmers over limited fertile lands. Among these conflicts, farmer-grazier conflicts have become perennial in the past decade and farmers are always found in the midst of court cases which at time do not favour them. This has led to the proposition of conflicts management options which if properly follow may yield some fruits.

Agro-pastoral conflicts are still difficult to manage in this area due to many factors; political influence, increasing human population, ethnic differences, climate change and the economic interest of the local population and stake holders and worst of all, the issue of over grazing in some villages such as Esu, Weh, Men and North West of Wum Central. These conflicts which manifest through fighting/clashes, loss of lives and the destruction of property, mass out-migration, disturbed peace and stability and reduced development are caused by a number of factors, they include, among others, the conquest spirit of most communities, poor land demarcation and population increase, land degradation, land tenure system and the migration to hollow frontiers [6]. In these areas, the impacts of conflicts have been greatly felt by the indigenous poor farmers who depend directly on agricultural produce for sustenance. As the people desire their capabilities at extracting a living from the environment, the economic expansionist interest continuously grow and this have orchestrated the agro-pastoral conflicts the division finds itself today.

II. THE PROBLEM AND CONCEPTUALIZATION

Land uses in in Menchum Division remain the fundamental for human survival. It gives bread to the inhabitants through it natural resource base. It sustains the over 163,000 people in Menchum and the over 123,000 cattle and other livestock in the Division and also provides farmlands for these people. In recent years, there has been growing changes in the land uses; there is continuous expansion in the farmlands, grazing lands and settlements. These expansions have led land use problem since land remain a fix factor of production. Population increase has continuously demanded more land and this has led to the contraction in some land uses due to the expansion of others. This remains the source of the perennial agro-pastoral conflicts in Menchum today.

Agro-pastoral conflicts increase with the contraction in land uses. Therefore, land use dynamism in Menchum Division aggravates conflicts from the depletion of the natural resource base. On the other hand, farmers demand for more farmlands to increase their output. Among the three types of conflicts witnessed in Menchum (farmer-grazier conflict,

farmer-farmer-conflict and grazier-grazier conflict), farmer-grazier have become perennial and its impacts on the population is far reaching. Menchum Division has therefore remained a conflict zone in Cameroon and one out of every 6 cases in court is related to damages from conflicts. These conflicts have led to destruction of property, farmlands and have increased the prices of many food items in the division.

A suitable and applicable concept to this study is the Homer-Dixon's Model (1999) cited in [7]. According to the model, environmental scarcity is defined as-scarcity of renewable resources, such as cropland, pastureland, forests, and water and fish stocks. It can arise in a number of ways, from depletion or degradation, increased demand or unequal distribution [7]. At a first glance, the unequal distribution aspect may not seem obvious, but it is important because it again involves horizontal inequalities, only with regards to the environment instead of economics. While a resource may be abundant in some areas like vegetal cover in Gayama and Torkisong, Menchum Valley, its scarcity in others (Ukpwe, Sangwa, Wum) create a situation where groups (farmer and herders) are forced to compete over it. If the resource is significant enough and available only along the lines of the horizontal divisions, this can then be a source of increased tensions and potential violence. The link between environmental scarcity and conflict has been supported by many researchers, with many case studies having been published in support of the theory [9, 10, 11].

The foremost proponent of this school of thought is Homer-Dixon, who originally started publishing his theory on the causal links back in 1991. Expanding on this, the theory posits that growing scarcity, especially over arable land and other natural resources, can potentially lead to violent conflicts, though indirectly. These environmental scarcity problems interact in a complex fashion with other social, political and economic forces within a society. The social, political, and economic factors interact with the instances of environmental scarcity to create five potential social effects which are not mutually exclusive, constrained agricultural activity, constrained economic activity, migration of affected people in search of better lives, greater segmentation within the society and the disruption of institutions, especially those pertaining to the state [12].

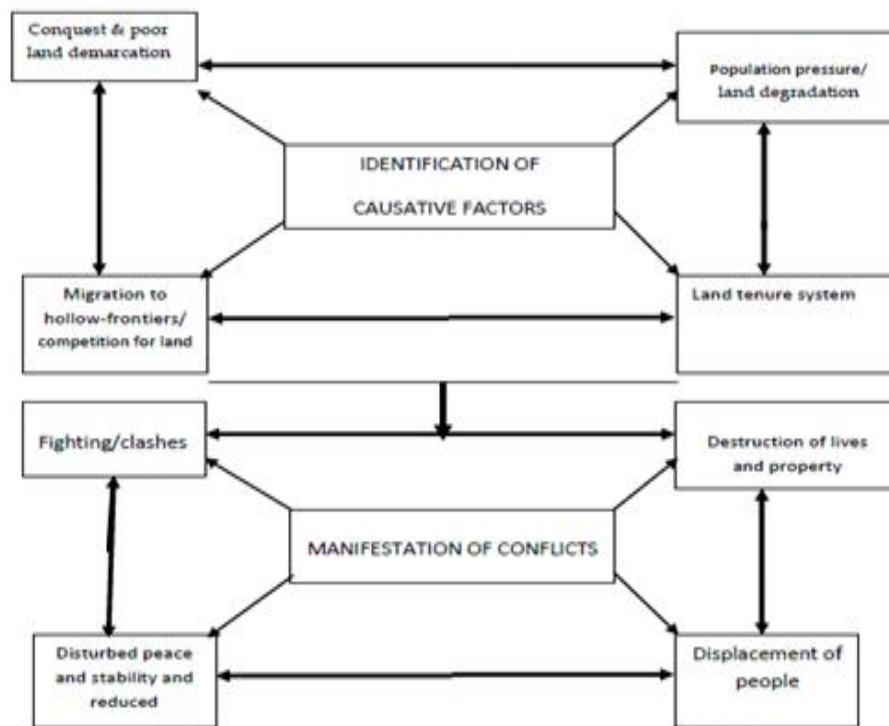


Fig.1: Conception of drivers and manifestations of land conflicts in the North West Region of Cameroon.

These conflicts which manifest through fighting/clashes, loss of lives and the destruction of property, mass out-migration, disturbed peace and stability and reduced development are caused by a number of factors, they include, among others, the conquest spirit of most communities, poor land demarcation and population increase, land degradation, land tenure system and the migration to hollow frontiers (Figure 1). Cognisant of the land conflict drivers, the study develops a three-phase conflict resolution model for solving inter-ethnic and intra-ethnic conflicts whose application could redress the perennial problem of land conflict resolution.

III. METHODOLOGY

This consists of data collection and data analysis procedures. The design widely employed historical, descriptive, exploratory and experimental procedures. Data for this study included both the primary and secondary sources. The primary source of data began with a reconnaissance survey throughout 2012 and early 2013. Fieldworks were conducted in the major agro-pastoral areas of Esu, weh, Mmen in Fungom Sub division, Benakuma, Befang in Menchum Valley and part of Wum Central sub-division. In the

fieldwork, interviews were conducted with the Senior Divisional Officer for Menchum, Divisional Officers for Fungom, Delegates of Livestock Fisheries and Animal Industry, Agriculture and Rural development local chiefs and police officials. The use of two topographic maps for land use change was also a fertile tool for this work.

The questionnaire was also a useful research tool in the collection of primary data. A total of 178 questionnaires were distributed to livestock herders, crop cultivators, laying emphasis on the causes and consequences of conflicts and the respondents' satisfactions on their management. Also, secondary information was got from Veterinary offices, the Divisional offices and reports from various delegations.

IV. THE STUDY AREA

Menchum Division is one of the fifty-eight Administrative divisions of the Republic of Cameroon. It is located within the North West Region of the country between Latitudes 6° and 7° N and Longitudes 9.3° and 10.30° E. It shares boundaries with the Federal Republic of Nigeria to the North West, Donga Mantung Division to the north east, Boyo Division to the south east and Mezam and Momo Divisions

to the south-east (Fig.2). The surface area of this division is approximately 4489 square kilometres with a population of about 161998 inhabitants giving a population density of 36 persons per square kilometer (2005 Pop Census). This people survive on agriculture and cultivate all the hills, valleys and

plains of Menchum Division. The division is made up of lowlands, intermittent slopes and very steep slopes of over 2,300 metres high. These highlands are prone to soil erosion and poor agricultural production thereby forcing a majority of the people into valleys for agriculture.



Fig.2: Location of Menchum Division.

Menchum Division is made up of four sub-divisions and covers a total land surface of 4489 Km² and a total population of 161998 as of 2005 population Census (MINEPAT, 2012), giving an average population density of 36 person/ km². These sub divisions are Fungom Sub Division with a total land surface of 2034.5 km², Furu Awa Sub division with a total land surface of 1157.6 km², Menchum valley sub division with a total land surface of 1040.5km² and Wum central Sub Division covering a total land surface of 256.4 km². It is made up over 50 major villages ruled by chiefs and a host of sub villages.

This division has survived through the cultivation of crops and the raising of animals. The increased human population has perpetuated the dynamism in its land uses today. This has put more pressure on the available land. The formerly fertile up hills are now unfertile and this has sent a greater farmer and pastoralists into the valleys where land conflicts have generated. The soil is exhausted, vegetation depleted, water scarcity especially in the dry season and the impacts of climate change and variability are all factors behind conflicts today in Menchum.

V. RESULTS

5.1 The evolution of land use and agro-pastoral conflicts in Menchum division

Land use in Menchum Division has significantly evolved through time. The different land uses include; agricultural land use; pastureland and farmland and settlement land. This rural land uses have evolved over time due to increasing population. Out of the 163,000 people, who lived in Menchum, 90% are farmers while 10% are graziers. But this 10% graziers use about 90% of the land [13] and there is continuous demand for grazing land and this has led to the rapid depletion of the natural resource base. Balgah [1] strictly linked land use dynamics to population growth and the desire for the earth's materials by the increasing human population. Before the 1980s, a greater part of Menchum was composed of forests (tropical rainforests and the raffia forest) and extensive savanna. There was low population density, low livestock density, poor accessibility and the most of the people practice shifting cultivation. The major commercial crop was coffee which flourished areas around the homes cultivated mainly by the indigenes. However, this situation changed in late 1980s when population figures escalated, and herder opted for permanent settlement as against the prior 1980 nomadic way of life. Livestock number also increased and there was massive demand for agricultural and

settlement lands and accessibility was also improved upon. This invited a lot of people into the then fertile lands of Menchum. The desire to grab more lands by these people saw themselves in a midst of conflicts since these lands became exhausted. The formerly large savanna vegetation

has today been depleted through over grazing, the tropical rain forests have reduced due to agricultural expansion and the raffia forests have been widely used exclusively for construction and firewood (Table 1).

Table.1: Land use dynamic in Menchum division

Serial Number	Land use type	Surface area (Km ²)		
		1980	1998	2012
1	Urban and sub urban land use	100	152	198
2	Permanent cultivation/fallow	650	800	1000
3	Slash and burn shifting cultivation in forest area	73	88	108
4	Slash and burn shifting cultivation in savana	60	82	98
5	All year round farming and grazing	175	199	225
6	Uplands with mainly wet season grazing	220	550	700
7	Flood plains: dry season grazing and rice cultivation	22	48	65
8	Forests	450	320	265

Source: Estimates from the Divisional Delegation of State Property and Land Tenure for Menchum (2012)

This has led to soil depletion from over cultivation and the depletion of the natural resource base through over grazing. Table shows the dynamism of land uses in Menchum Division for a period of 32 years. The drive to meet short-term needs for farmlands, grazing, fuel wood, hunting, timber and settlements from the increasing human population

has called for a corresponding increase in food demand and the urge for livestock keeping, aided by cultural strings. By 1980, there were still large extensive virgin forests and grasslands because the population density was very low, and there was low demand of farm and grazing lands (Fig.3a).

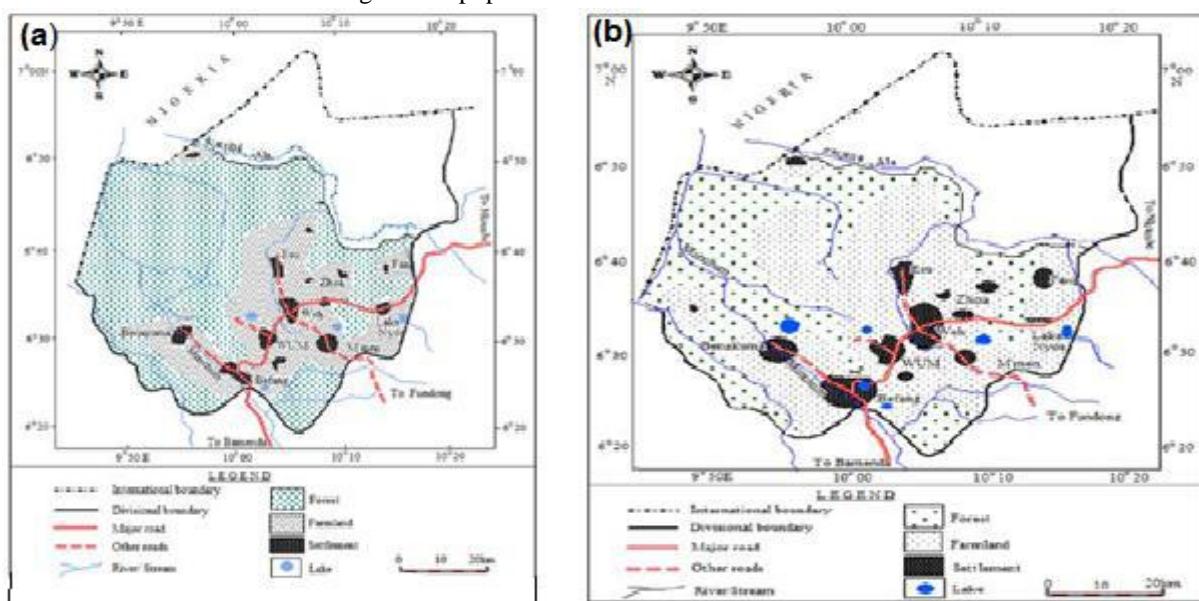


Fig.3: (a) Land cover change in Menchum in 1980; (b) land cover change in Menchum in 2012

During this year, 75% of land was covered by vegetation, 7% by settlement and 18% by farm and grazing lands. As the population increased rapidly, these large extensive forests were being threatened by rapid deforestation for farm lands and settlements. Today, the vegetation cover is about 60%, settlement covers about 14 % and farmland has increased to 26 % (Fig.3b). This vegetation is either as forest, grazing lands or wasteland on savanna.

The expansion in farmland and the increase in animal number have called for the increase in grazing land and thus conflicts. Three different types of conflicts are common in Menchum Division and have resulted from a host of factors: conflicts between farmers and pastoralists on access to productive lowland areas, conflicts over the use of crop residues for multiple alternative purposes (fuel, compost/fertilization, thatching, hedges) inside the households, conflicts because of restriction of transhumance movements by fields placed on animal tracks in order to profit of manure, conflicts between farmers and pastoralists over the use of biomass for composting or grazing, and over extension of fields in former pastoral areas.

5.2 Causes of agro-pastoral conflicts in Menchum division

The combination of human-induced environmental pressures and natural environmental constraints has seriously affected security within the landscape of Menchum. Environmental changes have contributed to conflicts which have affected food security and the socio-economic wellbeing of the people. Warmer temperatures, change in rainfall pattern and amount, contraction in vegetation for livestock as the number increases, land pressure on farmers to meet the food deficits and cope with the increasing population, the land tenure weakness, rough terrain and poverty are all major causes of conflicts in Menchum. These conflicts have negatively affected the production pattern of agriculture. The land tenure weakness and property right in Menchum Division have remained fundamental for agro-pastoral conflicts. Property right mediates the relationship between humans [14] and between the resource and humans [15]. This relationship between human and resources and human and human in Menchum Division is facing pressure from both fronts. Since there is no clear cut demarcation between farmlands and grazing lands, pastoralists and cultivators continuously expand beyond their boundary in search of more fertile soils and pastureland. This results from the growing environmental variability and population pressure.

In some areas like Wum and Esu where conflicts are perennial, herder deliberately go beyond their boundary because they feel that the acquired land remain small for their increasing animals. As nothing is done to the first few defaulters, every one follow suit and the expansion of farmlands become halted. The non-respect for boundary remains a serious threat to the conflict environment and this may increase conflicts if nothing is done soon.

Agro-pastoral mobility/transhumance have resulted to conflicts in Menchum. Environmental changes and population pressure have increased the trend of movement between cultivators and herders. The depletion of soils, the effect of climate change on water resources has forced the formerly upland farmers into valleys in search of fertile lands. In the same vein, the depletion of pasture land from the harsh climatic conditions forces livestock out of their normal grazing land where they believe pasture is superior to what they have around the surrounding. This is either through vertical or horizontal movement. This is mainly the case during the dry season and drought periods where livestock go on transhumance.

Their movements coincide with farmlands on their paths and this leads to destruction of crops and thus this stem up farmer-grazier conflict. The high concentration of people along the banks of the Imieh River has resulted to farmer-farmer conflicts in Esu. The movement of cattle to and from transhumance always carries destruction cases and farmer-grazier conflicts become inevitable.

The degradation of land and resource depletion has stemmed up land use conflicts in Menchum division. Soil depletion and vegetal deterioration have forced the indigenous farmer to inhale the desire for more farmlands so as to sustain their agriculture and maintain food security. Their desire to do this is cut short by fertile land scarcity and there is thus the conflicting land uses. Also, the deterioration of the vegetal cover has spurred up massive animal movements which go line in line with farmers. While farmers are looking for fertile lands, graziers are looking for pasture lands. A current land use conflict in Esu village has been caused by fluvial activities. The lateral planation of the Yemeweh River valley which contained more than 100 farmers and about 12 herders is today a conflict zone. Its continuous erosion has contracted farm and grazing lands and there is continuous fighting along this valley because of it fertile alluvial soils. This river that was formerly called the River of Plenty is today called the river of greed (Fig. 4).



Fig.4: Fluvial activities/ land degradation in Esu.

The increasing human and livestock population in Menchum Division desire land for farming and pasture. Since most of the people are either cultivators or graziers, the land is becoming more exhausted if not limited. This growth of human population and livestock number (Table 2) have always been blamed for the pressure exerted on our environment today since humanity depends on the natural resource base for sustenance. Since this land is already exhausted, the migration to other lands becomes a desire option. The cultivators and graziers have remained in a mass run to meet fertile soils and fresh pasture for their flocks which have always ended in conflicts. According to the 2005 population census and 2012 predictions, the population of Menchum today stands at over 163000 people. These people need food on daily basis and over 85 percent of them survive directly from the soil.

Table.2: Human and Livestock population for Menchum

year	Human population	Cattle population
1921	14,643	-
1927	22,155	-
1931	31,285	-
1943	41,315	50
1954	79,656	1,000
1960	83,656	25,000
1963	75,300	10,000
1968	83,192	22,997
1971	85,200	45,000
1976	88,192	89,000
1987	105,664	103,000
2005	159,552	120,000
2012	163,000	123,000

Source: Fieldwork, 2013

From the table, population pressure plays a leading rule in the prevalence of agro-pastoral conflicts in Menchum Division. This high percentage (23.6) confirmed that the increasing human population may continuous to stimulate conflict in Menchum Division. It was closely followed by those who opined that livestock mobility (18.5) is the brain child behind conflicts. This they see from the destructive effect cause by cattle during transhumance and from other domestic animals such as goats and pigs. 16.9 were for land degradation, followed by 15.7 for climate change. The least (11.2) talk on land scarcity.

5.3 Types and manifestations of agro-pastoral conflicts in Menchum division

The land scape of Menchum Division has witnessed three main conflict types; farmer-grazier conflicts, grazier-grazier conflicts and the farmer-farmer conflicts. Among these three conflict types, farmer-grazier conflict has remained the most severe and fatal conflict type. However, it was realized that most farmer-grazier conflicts in Menchum Division are caused by grazier-grazier conflicts.

5.4 Farmer-grazier conflict

This is one of the fatal and most frequent conflict types in Menchum Division. It occurs between graziers and the subsistence farmers due to the change in the environmental components (climate, water scarcity, soil deterioration and vegetation depletion) resulting from increase human population and livestock population from the permanent settled pastoralists. The depletion in soils support less palatable pasture for livestock and the expansion of grazing land become a necessity for pastoralists. Since livestock feed on the stubble of many crops especially maize, at times graziers allow their animals into mixed cropping fields when just one crop has been harvested. This always leads to the

destruction of other crops like cocoyams, beans and cassava (Table 3 and 4).

In the same vein, soil depletion due to over cultivation has also led to poor agricultural yields and farmers have the desire to expand their farmlands. Hence, this set the path for conflict between graziers and farmers. The hydrological change that has transformed many intermittent and ephemeral streams into dry valleys has forced the graziers to take down their stock to the valleys for water on daily basis. As they descend the hills, they pass through farm yards thereby destroying crops en route and hence disputes. The major cause of conflict has remained transhumance. The seasonal and daily movement of livestock passing through farm land leads to the destruction of crops (Table 3 and 4).

Since the 1980s, Menchum has remained a conflict zone and farmer-grazier conflicts have remained perennial as opposed to the prior 1980s where conflicts were either ephemeral or intermittent. Esu village with over 40,000 cattle has remained under the caprices of unresolved conflicts. This has been worsened by the introduction of the Elba Ranch in 1989. The continuous influx of cattle year in year out made grazing land to be limited forcing cattle to the periphery where farming is done. The growth of farmer-grazier conflicts has had great impacts on the population of Menchum in terms of economic damages (Table 3 and 4).

Taking a 4 year mean for the evolution of farmer-grazier conflict, it has been seen that the least conflict (4.3%) was recorded between 1982 and 1984. This period is said to be the time when population density was low and the cattle

population was limited because of the nomadic way of life by the graziers. The highest cattle conflict (16.1%) is recorded between 2009- 2012 due to increasing cattle population (Table 3 and 4).

According to [16], transhumance is a major cause of farmer-grazier Conflict and actions are embedded in larger interaction sequences. Walton divides conflicts into two phases: namely, differentiation and integration. The differentiation phase consists of the parties building a clear assessment or definition of their differences and the rationale behind these differences. The integration phase occurs after differentiation, and here the parties engage in the search for common ground and work toward a resolution. This distinction is more analytical than chronological [17]. During the differentiation phase, conflict may be —depersonalizedl by separating the issues from the personalities. This allows the parties in conflict to focus on the issues rather than on the persons during the integration phase (Table 3 and 4).

The risk of escalation during differentiation can be attributed to the following behavioral hypotheses that have been validated in empirical settings [16]: People try to maintain consistency between their beliefs and feelings (balance theory), which may lead to a personalization of the conflict and thus impede a clear identification of the rationale underlying the conflict. Farmer-grazier conflicts have caused more harm to the people of Menchum Division in terms of property lose and displacement. [6, 17], predicted that 400,000 farmers and 5,000 graziers lived in Menchum Division between 1943 and 2005.

Table.3: Differentiation phase and conflict outcome

Behavior	Results	Consequences
Differentiation Avoidance	Herder do not wish to interact with cultivators; they settle the issues quickly(pay a fine) and decide not to come to the area again	Conflict is avoided Pastoralists lose access to pastoral resources; cultivators lose access to manure
Escalation during Differentiation	Herders and cultivators engage in verbal than physical wars; violence erupts	Conflicts escalate: egMenchum Valley of February 2014 People get hurt, Pastoralists lose access to pastoral resources; are taken to the Zhoa and Benakuma courts of first instances and to the Wum high court, cultivators lose access to manure and at times are not compensated
“Successful” Differentiation	Herders and cultivators expose their views and identify their needs	Groundwork is laid or negotiated Integration; the parties in conflicts have identified their respective needs and may begin to think about possible solutions

Source: [16].

During this period, a projected number of 21,074 conflicts were registered making an average of 339 hostilities a year. Fieldwork 2013 estimated that there are 123,000 cattle in

Menchum and the number of farmer-grazier conflicts stands at 2521 and this has increased the damages caused by farmer-grazier conflicts.

Table.4: Farmer-grazier conflicts and estimated damages year

No of conflicts cases		Farmer-grazier conflicts	
		Damages	
1982-1984	680	About 320 farms destroyed, displaced about 240 farmers and about 78 cows killed	
1985-1987	840	Destruction of 450 bambaraGnut farms in Esu and displaced 120 farmers, 101 in Weh, 320 in Mmen and 156 in Wum. 250 cows mutilated, and about 230 goats and 200 pigs were killed	
1988-1990	1051	Forceful displacement of 300 farmers in Esu, destruction of 890 maize farms in Fungom, 240 in Wum and killing of 254 cows	
1991-1993	1395	Countless maize farms, groundnut, cassava, potato and beans destroyed. 58 cows killed	
1994-1996	1397	Over 670 farms were damages worth over 5 million Francs	
1997-1999	1660	Destruction of 45 houses at the Ranch area hosting about 125 framers, displacement of 200 farmers at Sangwa, 121 at Kedzong. Damages worth over 9 million FCFA	
2000-2002	2010	Displacement of about 35 farmers at Torkisong, destroyed over 540 maize farms, 870 groundnut, beans bambaraGnut farms in Fungom, 640 in Wum and 43 in Menchum Valley	
2003-2005	2104	Destruction of about 500 maize farms in Fungom, forced 75 farmers to abandon their farmsteads in Esu. Invasion of about 100 farms in Wum leading to a sit down strike. Displacement of 8 graziers in Wum. Damage estimated at 13 million Francs	
2006-2008	1999	Invasion of 345 vegetable farms, 230 groundnut farms and 132 bambaraGnut farms	
2009-2012	2521	Destruction of 689 maize farms in Fungom, invasion and displacement of 540 farmers in Wum, killing of about 750 cows	

Source: [17] and Author's Fieldwork

5.5 Farmers-farmers conflicts

Farmer-farmer conflicts resulting from environmental pressure is one of the old, frequent but also easily resolved conflict types in Menchum Division. This conflict has been felt throughout the division and highly populated villages of Wum, Weh, Esu and Bafmen are greatly hit. This conflict is associated to crop failures and the desire of the farmers to conquer more lands to meet up with food deficiency from the

depleted lands, or the expansion of a plot to increase its size at the detriment of the next farmer. A cheat in a boundary ridge could be enough to stem up a quarrel that could result into fight. In 1995, in Ukpwe, Wum, a farm dispute erupted between two farmers just because of boundary issue [19]. The conflict has grown from 4.7% between 1982-1984 to 16.2% between 2009 and 2012 resulting from land use pressure (Figure 5).

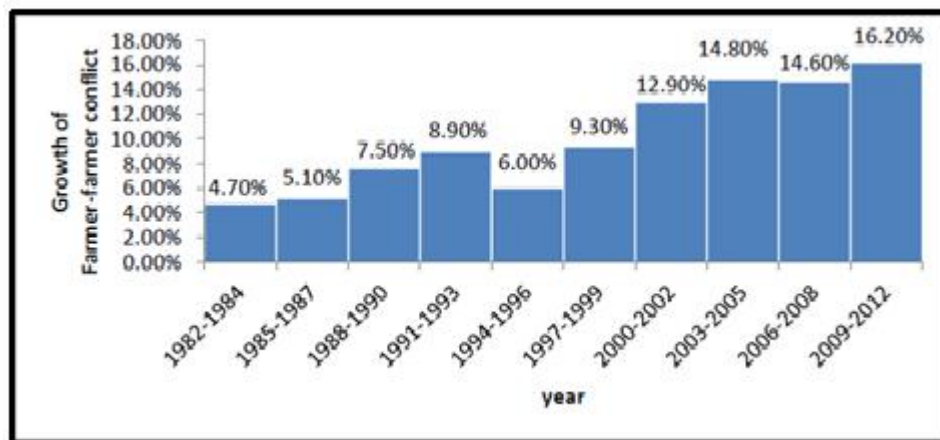


Fig.5: The evolution of farmer-grazier conflicts in Menchum Division. Source: Field work 2012.

In Weh, with limited agricultural land and high population density, farmer's conflicts are always recurrent as they now see the need for more land to support their population. In 1998, 2000, 2005 farmer conflicts resulted from Kelang, south of Esu between Esu and Weh because the Weh people had encroached onto Esu land at Zonghombvern. It called for the intervention of the Senior Divisional Officer (SDO) for Menchum and the DO for Fungom sub division.

5.6 Grazer-grazier conflicts

Grazier-grazier conflict remains a conflict type that has led to the massive displacement of livestock population in Menchum. It results from the increase in the animal number without a corresponding increase in pasture land (stocking rate). Though this had existed, it was not as pronounced as it is today. The introduction of the Elba Ranch in 1989 perpetuated this type of conflict. Since 1990, about 24 graziers had left the division with over 6000 animals (Estimate from Veterinary office, Esu, Wum and Benakuma) and many more have lost their livestock through raid. For the sake of peace and the desire to have animals, many herders have left the division to Fouban and some as far as North Cameroon. Resource depletion and the political set up of Menchum have called for the high frequency of conflicts. Some grazer-grazier conflicts have manifested through court cases. For instance, between 1990 to 2005, Clement Chu of Ukpwe, Wum had over 10 court cases in the Wum High

Court because of raid by graziers and the massive destruction of his property. From the year 2000 to 2005, AlhajiTashi and his descendants migrated from Torkisong with over 5000 cattle to Kessasei closer to the settlement because of rampant raid by the workers of the Elba Ranch who settled in close proximity with him. This has increased pressure on pasture at the new area. In January, 2013, Mr Stephen Zeh had a court case with AlhajiAmidou, a descendent of AlhajiTashi because he had settled on Zeh's land when he escaped the raid from Torkisong. What is very clear about grazer-grazier conflicts is that it leads to a line of other conflicts; from grazer-grazier to farmer-grazier and to farmer-farmer. This is a very common routine in Menchum Division. Grazer-grazier conflicts have evolved over time and its severity continues. Figure presents the evolution of grazer-grazier conflict in Menchum Division this conflict has grown over the years and the highest number of conflicts (13%) was registered between 2003 and 2005. This was in fact attributed to the devastated drought that hit Menchum in 2003. The least (5.5%) was registered between 1988 and 1993 and was attributed partly of the vast pastureland created by the Lake Nyos disaster. Until the 1980s, the Fulani and the bororos in Esu had abundant grazing resources that were governed by a loosely defined set of norm. These resources became increasingly scarce when the Elba Ranch was introduced in 1989. The ranch occupied an estimated 10,000 hectares of land which was expropriated from earlier grazer and local

cultivators. Local pastoralist encroached into the ranch territory during dry seasons. In response to the increased grazing pressure, the ranch devised system restrictions on the use of pasture near territory. This effectively excluded transhumant herds and established a local commons. The Esu chief and quarter heads oversee the management and use of the common pasture.

Demand for grazing resources increased from the early 1990s up to date when environmental changes increased the prices of cattle. Encroachment by the ranch into the local grazing land had further reduced grazing land available to the local graziers. This spurred up the longest grazer conflicts in the division and the trend of transhumance has increased. The fight between graziers in Esu over limited land has orchestrated farmer-grazier conflicts and farmer-famer-conflicts.

5.7 Agro-pastoral conflicts management options for Menchum division

The prevalence of agro-pastoral conflicts in Menchum Division has called for appropriate management options. According to [10] Conflict management encompasses both conflict prevention and conflict resolution to mitigate the effects of conflict. Conflict management is an attempt to feed learning that can make the conflict more productive and less costly into the process of conflict [12]. Settlement (or conflict-resolution settlement) is the situation in which the outcome of negotiation is accepted by both parties [13]. Traditionally, the response to conflict was fixed on resolution. However, the policy paradigm is now shifting and there is a growing recognition that conflict prevention strategies are probably more effective than resolution oriented strategies.

5.7.1 Approaches to conflict resolution in Menchum division

The increasing trend of agro-pastoral conflicts resulting from the depletion of the natural resource base and the increasing human and livestock number have called for many approaches in conflicts resolution.

The participatory approach has greatly been used which is according to [15, 16] is a collative and problem solving methodology, a democratic process which recognizes the people's right and responsibility to manage their own affairs. In regards to farmer-grazier conflicts, agro-pastoral stakeholders such as the farmers, graziers and administrators hold numerous meeting. A vivid example is the current Esu crisis where 10000 hectares of land is to be lost to the Elba Ranch. There have been participatory meetings between both parties like that of 18th May 2013. This they discuss issues affecting them and look for possible ways to limit the

prevalence of conflict though no agreement has been reached. In the face of grazer-grazier conflicts, meetings are usually called by the ardos of any conflict village or members of the zone in which the conflict escalates. In farmer-farmer conflicts, the chiefs usually call for the parties involve and negotiations are made.

Judiciary method has been widely used in the resolution of conflicts. Agro-pastoral conflicts in Menchum division have had a long history of resolution through the judiciary process. Between 1980 and 2013, over 150 court judgments had been given on the perennial land conflicts in Menchum Division. These cases are either passed in the courts of First Instance in Zhoa, BenakumaWum or the High Court in Wum. The court cases have always been through farmers and graziers over massive destruction of farmlands, the mutilation and killing of livestock and within graziers on the property right over grazing land. Between 1985 and 2005, Clement Chu of Upkwe, Wum had over 10 cases in the Wum High Court due to the raid of his cattle by other graziers and the massive destruction of his property.

The coercive method has also been used in conflict resolution in Menchum Division. According to [17] coercive method takes the form of a third party use of military or paramilitary forces to intervene in the violent conflicts to force peace, bring about an end to hostilities or suppress the conflict. The use of coercive methods by either a third party or parties does not usually guarantee a permanent resolution of the conflict. During the farmer-grazier conflict of 1993 in Esu and the indigenous misunderstanding of the royal mind in the resolution, the rioters were silenced by a truck of military men invited by the fon. The fon did that in respond to the rumor of from the youth to burn down the palace if graziers continuously tempered on farmlands.

The women power also continues to play leading roles in conflict resolution in Menchum Division. This feminine traditional elitist social group called *kefarp* with political and religious powers in Wum, Weh and Esu work hand in grove with the traditional authorities. In Esu, in a group of eleven women in their mid-sixties stacked naked with their heads and feet painted with camp wood were seen moving towards the cattle market in response to their grievances when their slashed and burn prepared grass were burnt by graziers in 1982 [16]. In 2013, following the Danpulo crisis in Esu, the *kefarp* declared none farming days until the problem be settled. Despite the fon instructions that people go to the farms, those who went for farming following the chief instructions paid fines to the *kefarpas* the Queen Mother instructed. Despite the above approaches to resolve conflicts in Menchum division, a greater number of conflict victims say they are not satisfied with the way conflicts are managed.

Table 5 shows the sample cases of conflict resolution satisfaction in some selected villages and most of them accepted that the prevalence of conflicts in the division needs preventive measures rather than resolution.

In Esu, Weh, Mmen and Ukpwe people are not satisfied with the way farmer-grazier conflicts are resolved. They are of the fact that conflicts have remained recurrent in their areas and

opted for prevention measures as the best solution to their problem. In Wum, Kuh and Kumfutu, the people were moderately satisfied with the resolution of conflict while in Zhoa, there was total satisfaction. The presence of the mayor for Fungom sub Division might have played a leading role in resolving conflict.

Table.5: Sample satisfaction in conflict resolution

Village	No of farmer-grazier conflicts	Number of individuals involved	Settled conflicts	Unsettled conflicts	Level of satisfaction of victims		
					Very satisfied	Moderately Satisfied	Not satisfied
<i>Wum</i>	150	540	104	46		√	
<i>Esu</i>	225	1240	98	127			√
<i>Weh</i>	102	420	42	60			√
<i>Mmen</i>	112	200	43	69			√
<i>Ukpwe</i>	210	230	65	145			√
<i>Kuh</i>	75	230	61	14		√	
<i>Zhoa</i>	32	98	19	13	√		
<i>Kumfufu</i>	45	78	16	29		√	
<i>Total</i>	951	2938	448	503			

5.7.2 Conflict prevention options

Agro-pastoral Conflicts in Menchum Division can be prevented through the establishment and enforcement of rules over natural resource use (grassland and forests), collective acceptance of such rules, and continuous negotiation of diverging demands. The regulation of access to natural resources (vegetation and soils) should aim both to prevent degradation and violent conflict. Community-based natural resource management including all user groups in the negotiation process about the rules of access is a promising option for conflict prevention between, pastoralists and farmers. The demarcation of farmlands and grazing land should clearly be done to avoid the conflicting land use in the face of a growing human population and environmental stress and shocks.

One of the most important to measures to prevent conflict in Menchum has been to overcome the widespread marginalization of pastoralists. The people of Menchum feel that there is need understanding pastoral livelihoods to enhance among non-pastoral groups, and the capacity of pastoral groups to promote their interests needs to be strengthened by giving them a voice in in the developmental process. In Esu, the project coordinator of the Esu Cultural and Development Association (ECUDA) of the 2011-2015

regimes is a grazier. Many more functions are given to pastoralist in the division. The underlying concept of subsidiarity offers an opportunity to improve political stability and empower pastoralists to see the negative effects of conflicts. Pastoralist organizations can facilitate the inclusion of herders' concerns and needs to manage conflicts can always be discussing in their assembly or as focus messages during their prayer days.

The opening of the Gayama Frontier for large scale transhumance was a very vital mechanism employed by the Senior Divisional Officer for Menchum in 2011 to prevent agro-pastoral conflicts in Menchum Division. This extensive low land with all seasonal perennial grasses can successfully fit an estimated 100 herds in the dry season. This therefore prevents the wild movement of livestock in the dry season and drought periods. This was established to reduce the incidence and intensity of conflicts between pastoralists and cultivators on key transhumant routes. The SDO demonstrated win-win benefits for both nearby communities and pastoral users of transhumant corridors by clearly marking the resulting borders; and by working with community leaders and administrative authorities in concert to ensure that when disputes emerge, they are resolved transparently and equitably.

There has been wide investment in the planting of improve pasture such as Brecharia and the Guatamala (Fig. 6); this

will in future limit the wide movement of livestock and hence prevent conflicts.



Fig.6: Partial view of tree planting to improve pasture in Brecharia at the Elba Ranch, Esu.

At the Elba Ranch, believed to be the major conflict source in Esu village, more than two hundred hectares of land (Plate 3) has been cultivated and in the nearest future, cattle will feed around especially during the dry season.

Agro-pastoral conflicts in Menchum Division are also prevented through the provision of subsidies and fertilizers to conflict driven villages by government. This has helped the people to improve on their farms and limit their desires to have more farmlands which they think sustain them. This will at least expand grazing lands for some time though population pressure cannot really avoid conflicts.

5.8 Why conflicts resolution is still a major problem in Menchum division

If one go by the history of conflicts in Menchum Division, he will feel that the long existing conflicts should have had a permanent solution by now. Instead agro-pastoral conflicts continue to increase on daily basis and its inability resolutions continuously. According to the local population in general and conflict victims in particular, two major political problems exist making the conflict question more problematic (1) the money minded royal lineage and (2) the appointment of officials to head the division which they know little about the root of conflicts. Population pressure and animal mobility due to environmental changes are also some major social and economic problems that plague conflict management in Menchum Division.

The local chiefs are the primary custodians of lands in Cameroon. This means that they are the ones to secure land for the future generation. But most local chiefs in Menchum Division continuously to sell their lands to graziers even though there is limitation of land to contain the already existing population. The worst is even that one piece of land is sold to many herders at a time. The weakness of some royal lineage and their desire for money have put a lot of

confusion in the minds of agro-pastoralists and conflict are to rise in the future if a good mechanism is not put in place. In Esu village, the competition for land is excessively high because grazier-grazier conflicts at Torkisong from 1999 to 2007, Kedzong and Sangwa of recent years have displaced many herders who have moved closer to the village settlement and this have aggravated farmer-grazier and farmer-farmer conflicts in the village thus making Esu the worst conflict zone in Menchum Division.

The appointments of Senior Divisional Officers and the Divisional Officers are a serious problem the indigenous population has identified in agro-pastoral conflict resolutions. According to them, most of the cases in SDOs and DOs offices favour the rich who are always the herders and the indigenes whose farms do not move become looser. Although some of the cases favour the victims and fines are paid, conflict resolution goes with the person on power. The issue of bribery and corruption in this conflict zone is very much pronounced. If the SDO is a Muslim, about 75% conflicts cases favour the Muslim and if a non-Muslim it took another dimension. The people of Menchum are of the fact that if SDOs and DOs were elected, they should have happy to concretize their peace from sorrows.

The prevalence environmental change stems conflicts. [6, 7] carried out a research on environmental change and acute conflict and concluded that there is a direct relationship between environmental change and conflicts in the world. Climate change and resource depleting have caused food and feed shortages and this has led to the displacement of people in the world especially on marginal lands like the Sahel region of Africa. Land scarcity is becoming a major problem in Menchum not because there is too little to go around, but because of "a process of competitive exclusion by which the small herders are increasingly squeezing off the land" from the large cultivators using roughly 90% of the land [17]. This

situation to expand grazing land at the expense of farmland has remained a serious problem in conflict resolution as farmers are not willing to retreat from their ancestral farmland in favour of herders.

VI. CONCLUSION AND RECOMMENDATIONS

The swelling of human population in Menchum Division has not only changed their land uses, but has put them into conflicts. Land use dynamic in Menchum Division has evolved over time and people are on a continuous fight for landed property. The depletion of soils, depletion of water supply, the shrinking of vegetation and the incident of climate change and variability has stemmed the increasing demand for land to meet up the short time needs of this growing population. This has however been limited and both farmers and graziers are moving to marginal lands for survival. Consequently, these marginal lands and valleys cannot contain the pastoralists and cultivators in their required numbers. This leads to the conflict in various land uses. These conflicts seen between farmers and graziers, farmers and farmers and within graziers have had a long history in Menchum Division. Due to the perennial nature of these conflicts, conflict resolution approaches have been put in place such as the participatory approach, the judiciary method and the coercive methods. These methods have hardly satisfied the victims. Thus some conflict prevention methods were employed and some of them are still ongoing. To manage conflict in Menchum, the property right should be reinforced. Grazier should know their limitations while farmlands are clearly demarcated from grazing land. Thus if defaulters of such laws are brought to book, the incident of conflicts will be limited. Agro-ecological conditions and livelihoods strategies should be employed. Identify threats to pastoral capitals. Understand the mix of livelihoods practiced, how these vary seasonally, geographically and ethnically and the coping strategies applied during crisis. Assess patterns of resource access rights and their link to environmental conditions. Education of both the cultivators and pastoralists should be enhanced through programmes and sensitization on the need of natural resource management. In fact, managing natural resource is managing conflict.

There should be local customary arrangements aimed to prevent, manage or resolve conflicts: These include the roles of traditional chiefs, elders, women, local administrators and the judiciary. Changes in context affect these dispute resolution mechanisms (e.g., gender roles, water points). More transhumance zones should be created to augment the Gayama frontier so that graziers should not scramble for the small fertile valleys with farmers during the dry season.

The local chiefs and administrators should not be bias in the management of conflicts. They should identify the rights of each group over the piece of land he/ she owns and educate the people on how to manage the land first as an individual. In times of conflict resolution, defaulters should be sanctioned according to the law. The various delegations of Livestock Fisheries and Animal Industry, Agriculture and Rural Development and that of State Property and Land Tenure should work hand in hand to curve out the various land uses and their areal extent. All these will limit the continuous prevalence of conflicts in Menchum Division.

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